

## APPENDIX A: DEBUG PROTOCOL ELEMENTS

### ○ Protocol details:

Example of coding of I-blocks (ISO 7816-3 amendment 2) (bits b8 (most significant bit) to b1 (least significant bit)):

b8 = 0 denotes a I-block

b7 is the block number

b6 is the More-data bit (0 indicates last block of sequence)

b5-b1 not used

According to one implementation, command or response is implied by the direction of the exchange (i.e., host sends commands, card send responses).

### ○ Debug functions:

GetContext: Retrieve current IC Card context information.

SetContext: Set current IC Card context.

Go (or Run): Execute an application or applet.

RunToPC: Execute an application or applet until program counter (PC) is reached;  
akin to a step function.

WriteMemory: Write to a specified location in IC Card Memory

ReadMemory: Read a specified location in IC Card Memory

GetNextBranch: Retrieve the next branch.

### ○ Debug Events:

AppStart: denotes application/applet starts.

AppExit: denotes application/applet exits.

1 BreakPoint: Identify a PC wherein execution of application/applet is halted.

2 Step: Incrementally execute application/applet

3 Exception: denotes an exception.

4 DebugString: a string of information sent in a debug frame to host.

5 SimulatorExit: denotes the end of execution of simulator.

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